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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,033	08/28/2003	Ulrich Walenta	076326-0265	7228
22428	7590	09/21/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			BROWN, DREW J	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/650,033	<b>Applicant(s)</b> WALENTA, ULRICH	
	<b>Examiner</b> Drew J. Brown	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 8/28/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/23/03 &amp; 1/15/04</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the cutout running along the circumference of the spindle as recited in claim 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: In paragraph 30 on page 5, the numeral for the deflection pulley should be 13 instead of 13'.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, the “end sections which are angular in cross section” renders the claim indefinite. It is unclear to the examiner exactly how the end sections are to be shaped.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiramatsu et al. (U.S. Pat. No. 5,313,690).

With respect to claim 1, Hiramatsu et al. discloses a belt-buckle tightener for a seat belt system in a vehicle having a rotatable spindle 312 which is connected to a belt buckle 11 via a draw-in cable 42A. The spindle and draw-in cable are arranged so that rotation of the spindle results in the draw-in cable being rolled up on the spindle and movement of the belt buckle in a direction that tightens the seat belt, wherein the drive is integrated in the spindle (column 3, lines

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30-37). The drive consists of the gas generator 32 as well as the rotary actuator 31, which are integrated in the spindle by being fastened to it through cylinder block 311.

With respect to claim 7, Hiramatsu et al. discloses that the spindle is coupled to a blocking device 5 which blocks rotation of the spindle counter to the rolling-up direction of the draw-in cable and thereby prevents the draw-in cable from unrolling.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu et al. in view of Maierhofer et al. (U.S. Pat. No. 6,676,057 B2).

With respect to claim 2, Hiramatsu et al. discloses the claimed invention as discussed above along with a coupling sleeve 411, which is connected in a rotationally fixed manner to a frame of the vehicle chassis (connected to the frame surrounding hole 21 via rotary actuator 31). Also, the spindle is mounted rotatably on the coupling sleeve (Fig. 2), the drive includes a gas generator 32, and the gas generator is fastened to the spindle through the rotary actuator and the coupling sleeve.

However, Hiramatsu et al. does not disclose that the driving belt is fastened at both ends to the coupling sleeve, wherein the driving belt is partially wound up on the coupling sleeve and runs around the gas generator when the belt-buckle tightener is not operating.

Maierhofer et al. does disclose a driving belt 20 that is fastened at both ends (14 & 16) to the coupling sleeve 10, wherein the driving belt is partially wound up on the coupling sleeve and runs around the gas generator 24 when the belt-buckle tightener is not operating (Fig. 1), which forms a space (inside driving band 20) for receiving gas that is produced by the gas generator. When the gas enters the space, the space is enlarged and the driving belt is unwound from the coupling sleeve, thereby producing a driving force and causing the spindle to rotate (column 3, lines 27-34).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Hiramatsu et al. in view of the teachings of Maierhofer et al. to have a driving belt that is fastened to the coupling sleeve and runs around the gas generator, where the driving belt is unwound from the coupling sleeve upon inflation, in order to reduce the space requirements of the drive along with the weight of the drive. Also, the drive belt is used in its one-piece form, so the cost of additional belts is not necessary.

With respect to claim 3, Maierhofer et al. discloses that the driving belt also runs around one or more guide elements 28.

9. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu et al. in view of Watanabe et al. (U.S. Pat. No. 5,634,690).

With respect to claim 8, Hiramatsu et al. discloses the claimed invention as discussed above but does not disclose that the blocking device is formed by tothing located on the circumference of the spindle and having a corresponding latch on the vehicle chassis.

Watanabe et al. does disclose a blocking device formed by tothing 62 located on the circumference of the spindle 32 with a corresponding latch 60 on the vehicle chassis. The

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toothings is positioned so that engagement with the latch only takes place when the spindle is rotated counter (direction indicate by arrow B) to the rolling-up direction of the draw-in cable.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Hiramatsu et al. in view of the teachings of Watanabe et al. to have the blocking device be formed of toothings around the circumference of the spindle with a corresponding latch in order to reduce the cost of manufacturing the belt-buckle tightener by forming the toothings of the blocking device integrally with the spindle. Also, space is saved because other additional components are not needed besides the latch.

With respect to claim 9, Watanabe et al. also discloses that the spindle has a cutout for receiving an end section of the draw-in cable (area in small diameter portion of pulley 26 which houses connecting piece 30), where the cutout comprises of two sections with different cross-sectional surfaces, so that a shoulder (flat surface of small diameter pulley between connecting piece 30 and wire 26) is formed in the cutout, and wherein the end section 30 of the draw-in cable has a larger cross-sectional surface than the remainder of the draw-in cable 26. The end section rests on the shoulder and prevents the draw-in cable from becoming detached from the spindle when the draw-in cable is subjected to a tensile load.

With respect to claim 10, Watanabe et al. discloses that the cutout runs along the circumference of the spindle (Fig. 3).

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu et al. in view of Watanabe et al., and further in view of Wier (U.S. Pat. No. 6,732,966 B2).

Hiramatsu et al., as modified by Watanabe et al., discloses the claimed invention as discussed above but does not disclose that the cutout is formed by a radial hole in the spindle.

Wier, however, does disclose that the cutout can be formed by a radial hole 50 in the spindle. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the combination of Hiramatsu et al. and Watanabe et al. in view of the teachings of Wier to use a radial hole to form the cutout so external objects cannot come in contact with the wire. This eliminates the possibility that another object impedes the belt-buckle tightening process during a collision.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hiramatsu et al. in view of Kopetzky et al. (U.S. Pat. No. 5,634,690).

Hiramatsu et al. discloses the claimed invention as discussed above but does not disclose that the draw-in cable runs over a deflection pulley provided on the belt buckle and is fastened at one end to the vehicle chassis.

Kopetzky et al. does disclose that the draw-in cable runs over a deflection pulley provided on the belt buckle and that it is fastened at one end to the vehicle chassis.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Hiramatsu et al. in view of the teachings of Kopetzky et al. to have the draw-in cable run over a deflection pulley provided on the belt buckle and fasten one end to the spindle and the other end to the deflection pulley so the end of the draw-in cable opposite the spindle is secured and unable to move; thus, it ensures proper belt-buckle tightening during a collision.



*Allowable Subject Matter*

12. Claims 4-6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

*Conclusion*

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Webber et al. (U.S. Pat. No. 6,866,296 B2), Isaji et al. (U.S. Pat. No. 5,607,185), Kopetzky et al. (U.S. Pat. No. 5,588,677), and Anthony et al. (U.S. Pat. No. 5,219,206) all disclose similar belt-buckle tightening devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 7 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Drew J Brown


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DJB



**DAVID R. DUNN**  
**PRIMARY EXAMINER**